

UNITED STATES OF AMERICA
BEFORE THE
DEPARTMENT OF ENERGY

Interstate Electric Transmission System
Electric Reliability Issues
Notice of Inquiry

COMMENTS OF THE
NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL

The North American Electric Reliability Council (“NERC”) submits its comments in response to the Notice of Inquiry on Electric Reliability Issues for the Interstate Electric Transmission System, issued by the Department of Energy (“Department” or “DOE”) on November 15, 2000.¹ In that Notice of Inquiry, the Department seeks comment on whether it should initiate a rulemaking, pursuant to section 403 of the DOE Organization Act, for final action by the Federal Energy Regulatory Commission (“FERC”) to impose mandatory electric reliability standards for the interstate electric transmission system.

NERC is a not-for-profit organization formed after the Northeast blackout in 1965 to promote the reliability of the bulk electric systems that serve North America. It works with all segments of the electric industry as well as customers to “keep the lights on” by developing and encouraging compliance with rules for the reliable operation of these systems. NERC comprises ten Regional Reliability Councils that account for virtually all the electricity supplied in the United States, Canada, and a portion of Baja California Norte, Mexico.

Executive Summary: Reliability Legislation, Not Rulemaking

NERC recommends that the Department focus its attention on securing passage of legislation that would establish mandatory and enforceable reliability rules, rather than pursuing a rulemaking under the authority of section 403. NERC has begun the transition to a new reliability organization, even in advance of passage of that legislation. The Department can advance the reliability of the North American bulk power system by supporting and promoting that transition, including providing funding for certain necessary reliability tools and systems.

NERC welcomes the Department’s continuing attention to the urgent need for mandatory and enforceable electric reliability standards. NERC and a broad coalition of interests, ranging from investor-owned utilities, rural electric cooperatives, municipally and provincially owned utilities, federal power marketing administrations, independent

¹ 65 Fed. Reg. 69753 (November 20, 2000).

power producers, and power marketers, to large and small consumers, and federal and state regulators, have been pursuing legislation to achieve mandatory and enforceable reliability standards for the past two years.² The proposed legislation is designed to meet these goals:

- Reliability standards must be mandatory and enforceable;
- Reliability standards must be fairly developed and fairly applied;
- Reliability standards must apply to all operators and users of the interconnected bulk power transmission system in North America;
- Reliability standards must be developed, implemented, and enforced by an independent, industry self-regulatory reliability organization, with oversight within the United States by the Federal Energy Regulatory Commission;
- Activities of the self-regulatory reliability organization must respect the international character of the interconnected North American electric transmission system;
- Regional entities must have a significant role in implementing and enforcing compliance with these reliability standards, with delegated authority to develop appropriate Regional reliability standards.

NERC will continue to pursue this legislation in the new Congress, either separately or as part of more comprehensive energy legislation. Adoption of this legislation must be the first order of priority with respect to bulk power system reliability for the Department as well. NERC believes that a rulemaking by the Department under section 403 would divert attention and resources from the legislative effort. NERC also believes, for the reasons stated below, that such a rulemaking would be unlikely to improve bulk power system reliability. A rulemaking could not effectively deal with the gaps and uncertainties in existing authority that the legislation is designed to address. Accordingly, NERC recommends that the Department not initiate an electric reliability rulemaking, but instead lend its full support to the effort to enact reliability legislation as soon as possible.

Background

The electric industry is undergoing a sea change in how industry participants are organized and how business is conducted. Those changes are placing significant stress on the interconnected grid. NERC is seeing increasing violations of the rules under which the grid has been operated reliably for more than 30 years. Those stresses result from the following changes:

- The grid is now being used in ways for which it was not designed.
- There has been a quantum leap in the number of hourly transactions, and in the complexity of those transactions.

² S. 2071, which embodies the NERC legislative proposal, passed the United States Senate on June 30, 2000. The NERC proposal, with minor variations, was also included in S. 2098 (Murkowski-Landrieu), S. 1047 and H.R. 1828 (Administration), H.R. 2944 (reported from the Subcommittee on Energy and Power on October 27, 1999), and H.R. 4941 (Wynn).

- Transmission providers and other industry participants that formerly cooperated willingly are now competitors.
- Rate mechanisms that in the past permitted utilities to recover the costs of operating systems reliably are no longer in place, or are inadequate given increased risks and uncertainties.
- The single, vertically integrated utility that formerly performed all reliability functions for an area is being disaggregated, and many participants now share the reliability responsibility.
- Some entities appear to be deriving economic benefit from violating the reliability rules.
- Construction of additional transmission capacity has not kept pace with either the growth in demand or the growth in construction of new generating capacity, meaning the existing grid is being used much more aggressively.

In short, the reliable operation of the interconnected high voltage transmission system in North America is increasingly at risk. The question is not whether, but when, the next major failure of the grid will occur. The reliability infrastructure for the electric industry, including the rules by which this infrastructure is operated, must evolve to keep up with the other changes taking place in the industry. These rules must be mandatory and enforceable — that is, there must be consequences for violations. Legislation is the only effective way for that to occur.

What DOE Can do to Help

In addition to working for prompt passage of reliability legislation, DOE can help assure the continued reliability of the interconnected grid, for example, by providing funding for the development and implementation of more sophisticated tools for monitoring system conditions and managing the flows on congested interfaces. This would make it possible for all security coordinators to have the best tools available. DOE assistance is needed because it is becoming increasingly difficult to secure funding from the Regional Councils, which are NERC's only members, for the development and operation of these tools and systems. Once reliability legislation is enacted, the new reliability organization will have the authority to fund such projects through a fair, broadly distributed charge to all users of the bulk power system. Until that time, NERC is only able to fund those projects that the Regional Reliability Councils (and in turn, their members) are willing to pay for. In some cases, utilities are under rate caps or freezes that prevent them from including in their rates the increased funding requirements for NERC projects.

Reliability of the interconnected grid is a public good. It's either there for all users of the system, or it's not there at all. As with any public good, there is the potential for free riders. The old assumption that "someone would take care of reliability" was valid: the vertically integrated utilities, be they public or private, looked after reliability. With the disaggregation of the utilities and the increase in competition, that old assumption no longer holds. Responsibility is now fragmented among many different participants. And at least for certain projects, shared responsibility may well mean no

responsibility. Coordinated development of certain reliability tools and systems, with an assured base of financial support, is one way to address that situation.

NERC in Transition

Because it is not clear when reliability legislation will be enacted and because there is an urgent need to strengthen enforcement of the reliability rules, NERC's Board of Trustees is taking steps to begin the transition to the new reliability organization now. This is NOT, however, a substitute for passage of reliability legislation. In the absence of legislation, serious gaps will remain. Even after the legislation passes, FERC must conduct an implementing rulemaking and the new self-regulatory organization must secure formal designation under the new statute.

To begin the transition, NERC's Board of Trustees charged Board-level task groups with developing recommendations for action at NERC's February 2001 Board of Trustees meeting in three areas:

Governance — To recommend the details of how governance could be turned over to the NERC independent Trustees with a stakeholders committee available to provide advice and recommendations.

Funding — To consider a new funding model for NERC that would incorporate the concept of user fees.

Compliance — To recommend a contract-based model in which Regional Councils enforce compliance with selected NERC and Regional standards, including the imposition of monetary penalties and other sanctions. NERC would have responsibility for oversight, coordination, and assessment of effectiveness of the Regional programs.

The task groups have posted detailed recommendations in all three areas on NERC's web site for comment,³ and the proposals will be presented for action at NERC's Board of Trustees meeting on February 12–13, 2001.

Responses to DOE's Specific Questions:

- 1. Is the existing arrangement of voluntary compliance with industry reliability rules sufficient to ensure reliability of the bulk power transmission system? If not, why not, and has reliability been jeopardized by violations of the existing bulk power reliability standards?*

The existing voluntary arrangement for maintaining compliance is not sufficient to assure the continued reliability of the interconnected grid. That was the conclusion of the Electric Reliability Panel, twelve outside experts engaged by NERC to study that question, in 1997. That was also the

³ The URL for the posting is www.nerc.com/naero/index.html.

conclusion reached by the Secretary of Energy Advisory Committee's Task Force on Electric System Reliability in September 1998. Missing from the current voluntary arrangement are two things: the legal obligation on the part of system operators and users to comply with the reliability standards, and an effective enforcement mechanism to bring about compliance when they do not.

The existing voluntary arrangement will no longer suffice for a number of reasons:

- The grid is now being used in ways for which it was not designed.
- There has been a quantum leap in the number of hourly transactions and in the complexity of those transactions.
- Transmission providers and other industry participants that formerly cooperated willingly are now competitors, and new entities without a history and practice of cooperation are also competing in the market.
- Rate mechanisms that in the past permitted utilities to recover the costs of operating systems reliably are no longer in place or are inadequate, given rising risks and uncertainties.
- Vertically integrated utilities that formerly performed all reliability functions for an area are being disaggregated, and the reliability responsibility is now fragmented among many industry participants.
- Some entities appear to be deriving economic benefit from violating the reliability rules.
- Construction of additional transmission capacity has not kept pace with either the growth in demand or the growth in construction of new generating capacity, meaning the existing grid is being used much more aggressively and extensively.

The economic and competitive pressures being brought to bear on control area operators by the evolving competitive market are huge. In the past, vertically integrated utilities with fuel adjustment clauses and purchased power clauses had ready mechanisms for recovering the costs of dispatching units out of merit order to serve reliability purposes. With unbundling and the growth of the competitive market, those mechanisms are no longer readily available in most parts of North America. Despite some notable successes, the industry overall has not yet developed substitute mechanisms for dealing with this growing problem. Without an effective way to enforce compliance with NERC and Regional Reliability Council reliability standards, NERC believes that serious violations of the reliability rules will increase.

NERC already is seeing such violations occurring more frequently, as illustrated by the following examples:

Violation: Failure to eliminate operating security limit violation within the prescribed period of time.

Reasons more violations can be expected: System operators have insufficient information about transactions on the grid; system operators have insufficiently analyzed the grid as it is currently being used; unscheduled power flows resulting from other violations make it difficult to control what is happening on the grid; absence of clear and common standards and consequences for violations leads to system operators being reluctant to disconnect firm customer load when it is the only remaining option for returning the system to safe operating limits.

Result: The interconnected grid is at increased risk of cascading failure in the event a contingency (i.e., a forced outage of some sort) occurs.

Violation: Failure to confirm commercial electricity transactions with other control areas whose systems could be affected by those transactions.

Reasons more violations can be expected: System operators are devoting insufficient resources to handle this function during high-volume periods; system operators are not giving this function a sufficiently high priority; the tools currently available to handle this communication cannot efficiently handle the volume of transactions in high-volume periods; absence of clear, common, and enforceable standards for confirming transactions.

Result: Possible risk of transmission system overloads due to lack of knowledge of transactions affecting the system of an entity with no commercial involvement in the transaction.

Violation: Failure to contact source control areas when transactions are curtailed or halted. This failure also occurs when implementing transactions.

Reasons more violations can be expected: System operators are devoting insufficient resources to handle this function during high-volume periods; system operators are not giving this function a sufficiently high priority; the tools currently available to handle this communication cannot efficiently handle the volume of transactions in high-volume periods; lack of common and enforceable scheduling standards, including common ramp rates for starting and ending transactions.

Result: Over or under generation can exist in the system, causing frequency to be low or high. Also, because generation is running that should not be, unscheduled flows will occur on the system that may cause unexplained overloading of facilities.

Violation: Failure to communicate adequately with security coordinators and other control areas during critical peak load periods.

Reasons more violations can be expected: System operators are devoting insufficient resources to handle this function during high volume periods; system operators are not giving this function a sufficiently high priority; the tools currently available to handle this communication cannot efficiently handle the volume of transactions in high-volume periods; lack of clear, enforceable standards for communications.

Result: Limits ability of security coordinators and other control areas to make appropriate decisions for outages of transmission or generation facilities.

Violation: A control area's taking/pushing unscheduled electricity from/onto the Interconnection (not balancing generation and load), which causes frequency to deviate from 60 Hz and causes unscheduled flows on the transmission systems of others.

Reasons more violations can be expected: The current remedy of returning energy in kind at a later date can be far less expensive than purchasing sufficient energy to balance generation and load in real time; lack of enforceable standards.

Result: Greater risk of the system remaining unstable for the unexpected loss of other generation resources and inability of system operators to affect flows on the grid.

Violation: Implementing electricity transactions (schedules) without adequate evaluation of the impacts on neighboring systems.

Reasons more violations can be expected: Some transmission providers are not examining network effects when transmission service is authorized; insufficient information and tools available to examine network effects adequately; some transmission providers are relying on transmission loading relief procedures for congestion management instead of utilizing less disruptive procedures; some transmission providers may gain additional revenue by overselling the transmission system; there is a mismatch between the current "contract path" method of arranging for transmission service and actual power flows on the physical network; lack of common, coordinated procedures for determining transmission system capabilities.

Result: "Overselling" of the transmission system capabilities resulting in operating security limit violations and ultimately need for transmission loading relief.

Violation: Refusing to reduce scheduled transactions when called for by security coordinators.

Reasons more violations can be expected: The existing communications systems are inadequate for communicating necessary information during high-volume periods; reducing scheduled transactions can impose additional costs that may not be compensated; some system operators are not placing a sufficiently high priority on this requirement; lack of consequences for non-compliance with standards.

Result: Fails to eliminate operating security limit violations and jeopardizes the system.

Violation: Failure to post adequate and timely information on transmission loading relief actions.

Reasons more violations can be expected: Some system operators and security coordinators are not devoting sufficient resources to this function to handle the task during high-volume periods.

Result: Insufficient information provided to the market.

Violation: Failure to report true sources and sinks (loads). May report several transactions tied end to end with intermediate sources and sinks.

Reasons more violations can be expected: Some entities may be attempting to avoid available transfer capability limitations or avoid the effect of transmission loading relief procedures; some entities may be attempting to mask commercially sensitive information; the analytical tools have not kept pace with the complexity of transactions that can be expected in a more competitive environment; concerns with independence of system operators.

Result: Does not allow transmission providers to properly evaluate the impact of the transaction on their systems resulting in operating security limit violations.

For all these reasons, NERC and a broad coalition of interests have worked for enactment of legislation that would authorize creation of an independent industry self-regulatory reliability organization, with oversight within the United States by FERC, to develop, implement, and enforce mandatory reliability rules.

2. *What can FERC do under existing authorities to address reliability concerns?*

FERC's capacity to deal with reliability issues is severely limited by a lack of clear jurisdiction over reliability matters, by its lack of jurisdiction over significant portions of the grid and over a significant number of key participants, and by a lack of technical expertise. FERC itself has acknowledged that it does not have direct responsibility for reliability.⁴

In the wake of the Northeast blackout in 1965, legislation was introduced in Congress that would have given the Federal Power Commission, FERC's predecessor, a central role in assuring the reliability of the interconnected grid. That legislation did not pass. Instead, the industry undertook a coordinated, voluntary effort to deal with reliability. That is how NERC came to be formed. The federal authority over reliability matters that does exist is limited and divided between the Secretary of Energy and the Federal Energy Regulatory Commission.

The Secretary of Energy has the following authorities:

- If the Secretary determines that an emergency exists by reason of a sudden increase in the demand for electric energy, or a shortage of electric energy or of facilities for the generation or transmission of electric energy, the

⁴ See Notice of Interim Procedures to Support Industry Reliability Efforts, 91 FERC ¶ 61,189 (2000).

Secretary may order the temporary connection of facilities and the provision of generation and transmission services to meet the emergency shortages. (Federal Power Act, section 202(c).)⁵

- The Secretary, in *consultation* with FERC, *may request* the Regional Reliability Councils or other appropriate persons to examine and report concerning any electric reliability issue. (Public Utility Regulatory Policies Act, section 209(b).)
- The Secretary, in *consultation* with FERC and after public comment, *may recommend* industry standards for reliability to the electric industry, including standards with respect to equipment, operating procedures, and training of personnel. (Public Utility Regulatory Policies Act, section 209(c).)

FERC's authorities with respect to reliability are limited, indirect, and largely untested:

- FERC does not have plenary jurisdiction over all industry participants. In most situations the Commission has jurisdiction only over "public utilities." That term excludes state- and municipally-owned systems as well as rural electric cooperatives with Rural Utilities Service financing, the federal power marketing administrations, the Tennessee Valley Authority, and all companies within the Electric Reliability Council of Texas. (Federal Power Act, sections 3(3) and 201(f).) Nor does FERC have authority over interconnected systems in Canada and Mexico.
- FERC may divide the country into regional districts for *voluntary* interconnection and coordination of facilities for the purpose of assuring an abundant supply of electric energy throughout the United States, and to *encourage* interconnection and coordination. (Federal Power Act, section 202(a).)
- FERC has authority, upon application, to direct a public utility to establish physical connection of its facilities with other facilities, and to sell and exchange energy. This authority may not be used to require the enlargement of generating facilities, or if the connection would impair the ability of the utility to render adequate service to its own customers. (Federal Power Act, section 202(b).)
- FERC has authority to require that each public utility (a) report promptly any anticipated shortages of energy or capacity that would affect the utility's ability to serve its wholesale customers, (b) maintain contingency

⁵ It is under this authority that the Secretary has recently issued orders regarding the provision of power to the State of California.

plans respecting shortages, and (c) accommodate any shortages in a manner that gives due consideration to public health and safety and treats all persons without undue prejudice or disadvantage. (Federal Power Act, section 202(g).)

- Whenever FERC finds that any rule, regulation, or practice affecting a rate is unjust, unreasonable, or unduly discriminatory, it may determine the just and reasonable practice to be thereafter observed. (Federal Power Act, section 206(a).) This is the primary section under which FERC exercises its authority over rates and terms and conditions of service. In two reported cases, the Commission stated that reliability issues might sometimes fall within its ratemaking jurisdiction. In Green Mountain Power Co., 59 FERC ¶ 61,213 (1992), the utility had filed new transmission rates, and some customers intervened and asserted they were subject to rolling blackouts and voltage reductions. The Commission ruled that the reliability issues could be addressed in the section 205 rate hearing as an issue of whether rates should be adjusted to reflect the quality of service. The case later settled without a further merits order. In North Carolina Electric Membership Coop. v. Virginia Electric Power Co., 52 FERC ¶ 61,298 (1990), customers filed a complaint seeking a declaration that VEPCO was not providing adequate facilities to meet its contractual requirements for firm wholesale and firm transmission service. The Commission set the complaint for hearing on whether VEPCO's service provided the reliability specified in the contract and what would be the costs of the facilities, if any, that would be necessary for VEPCO to meet its contractual obligations. The Commission expressly declined to define the scope of its remedial authority.⁶
- If FERC finds, after complaint by a State commission, that any interstate service of any public utility is inadequate or insufficient, FERC may determine the adequate or sufficient service to be furnished and fix the same by order, rule, or regulation. (Federal Power Act, section 207.)
- In order to secure information necessary for recommending legislation, FERC is authorized to conduct investigations regarding generation, transmission, distribution, and sale, whether or not subject to FERC's jurisdiction, and to secure and keep current information regarding operating and control of electric facilities. (Federal Power Act, section 311.)

FERC's own view is that it has only limited jurisdiction in the area of reliability matters. It sees its role as assuring that the voluntary reliability

⁶ See also Western Systems Coordinating Council, 87 FERC ¶ 61,060 (1999), where the Commission applied a rule of reason to determine when to scrutinize reliability practices that impact the Commission's jurisdiction under Federal Power Act section 206.

standards are not administered in a discriminatory way or in a way that would thwart the Commission's open access transmission policies. See, e.g., New York State Reliability Council, 90 FERC ¶ 61,313 (2000).

For decades the industry has maintained the reliability of the interconnected grid on a voluntary basis, using industry expertise in this highly technical and complex arena, without the involvement of federal regulatory authorities. Because FERC and its predecessor, the Federal Power Commission, have never exercised authority over reliability matters, FERC does not have the technical expertise to deal with complex reliability issues on its own. It has not in the past had a reason to develop that area of technical competence. FERC's strengths are in economic regulation and in assuring the fairness and adequacy of the decision making process.

For FERC itself to exercise authority to set and enforce reliability standards would also raise serious international issues. The grids of the United States and Canada are wholly integrated, and operate as a single machine. All parts of that machine must operate under a common set of rules. If FERC sets reliability standards, it could be creating inconsistencies with the standards that are followed in Canada. This was one of the principal reasons for recommendations in the legislation for use of an international, industry self-regulatory approach for setting standards that would apply on both sides of the border.

FERC can make use of its existing authorities to support the continued reliability of the interconnected grid. FERC has agreed to serve as a dispute-resolution backstop for its jurisdictional companies with respect to the contract-based Reliability Management System developed by the Western Systems Coordinating Council. NERC expects that additional Regional Reliability Councils will ask FERC to take on that role for the contract- or agreement-based compliance and enforcement programs that they develop in conjunction with the NERC transition plan discussed above. FERC can also exercise its rate authorities to assure that public utilities can recover in their rates (i) the funds they need to undertake necessary reliability measures in their own operations, and (ii) the funds needed to support the continuing activities of NERC and the Regional Councils.

3. *If FERC has the authority to establish and enforce reliability standards, may FERC delegate such authority to a self-regulating reliability organization? Should it do so?*

As stated in answer to question 2, FERC does not have authority to set and enforce reliability standards. Even if FERC did have such authority, FERC would not have authority to delegate such activities to a private organization. FERC is a creature of statute. It has only the authority that its enabling

statutes give it. Nowhere in any of those statutes is there authority for FERC to make such a delegation. Enforcement is inherently a governmental function. Proper delegation of the enforcement function to an industry self-regulatory organization requires that there be government oversight.⁷ Thus, legislation is needed to authorize the delegation of the enforcement function, and to designate an appropriate government entity in a backstop role.

Just as importantly, from the standpoint of the self-regulatory organization and its members and participants, there must be legislation to address the potential exposure they may have to antitrust liability. Self-regulation involves by its very nature collusive conduct in restraint of competition.⁸ Reliability rules must, of necessity, place limits on how much the electric transmission system can be used. Those limits are essential if the interconnected high-voltage transmission system is to remain stable and secure. Carefully crafted legislative provisions can strike a satisfactory balance between the need for appropriate collaborative behavior in support of reliability and improper activity that would adversely affect competition. S. 2071 as it passed the Senate last year had such a provision, as did other legislation pending at the time Congress adjourned. Congress can strike that appropriate balance. FERC has no authority to do so.

4. *Are there elements in CECA [the “Comprehensive Electricity Competition Act”], or other electric reliability legislative language, which can, with or without modification, be used in a rulemaking?*

The reliability provisions in CECA are derived in large measure from the NERC consensus reliability language. Those provisions were developed to create the authority necessary for the establishment of a new reliability structure with mandatory and enforceable reliability rules. Because they create new authority, they cannot simply be transferred to the rulemaking context. For example, one of the key elements of the NERC consensus reliability legislation is bringing all bulk power system users in the U.S. under FERC jurisdiction for purposes of enforcing compliance with approved reliability standards. To accomplish this requires that additional statutory authority be provided to FERC. Extending FERC’s jurisdiction to what are currently non-jurisdictional entities cannot be accomplished through rulemaking. Without such additional authority, any rulemaking effort would fall far short of addressing reliability concerns.

⁷ See *Public Citizen v. Nuclear Regulatory Commission*, 901 F.2d 147 (D.C. Cir.), *cert. denied*, 498 U.S. (1990) for the perils of proceeding with agency establishment of an industry self-regulatory program in the absence of authorizing legislation; see also “Federal Agency Use of Audited Self-regulation as a Regulatory Technique,” Final Report (November 1993) and Supplemental Report (February 1994), prepared for the Administrative Conference of the United States (hereinafter “ACUS Report”).

⁸ ACUS Report, at 32.

5. *What should the relationship be between Regional Transmission Organizations, as advanced in FERC Order No. 2000, 65 FR 809 (January 6, 2000), FERC Stats. & Regs. ¶ 31, 089 (2000), and an Electric Reliability Organization as proposed in CECA?*

Under the NERC consensus reliability legislation (and that language is embodied largely in CECA and other electric industry restructuring bills), the electric reliability organization would set and enforce rules for the reliable operation of the bulk power system. The electric reliability organization would also report on the adequacy of generation capacity and the interconnected transmission system, and make recommendations for needed improvements.

The regional transmission organizations that FERC envisions in Order 2000 are classified as system operators under the proposed reliability legislation. Under the proposed legislation, all system operators would be required to be members of the electric reliability organization and any affiliated regional reliability entity. As such, all regional transmission organizations would be obligated to comply with the reliability standards that are developed by the electric reliability organization and approved by FERC.

Under Order 2000, the Commission fully intends that there be a separate standard-setting and enforcing organization for reliability matters and that the regional transmission organizations would conform their behavior to standards set by that separate organization. In response to comments made during the rulemaking urging that regional transmission organizations be authorized to set their own reliability standards, the Commission stated:

We conclude the RTO must perform its [short-term reliability] functions consistent with established NERC (or its successor) reliability standards and notify the Commission immediately if implementation of these or any other externally established reliability standards would prevent it from meeting its obligation to provide reliable, non-discriminatory transmission service. Docket No. RM99-2-000, Preamble at 323.

The Commission's directive that RTOs be responsible for short-term reliability only shifted responsibility for operating functions that are now performed by existing control areas to the RTOs.

6. *How should the responsibilities and roles of FERC and the States be addressed in a rulemaking?*

The responsibilities and roles of FERC and the States derive from the United States Constitution and various statutory provisions. The roles and responsibilities are in reality jurisdictional matters that cannot be altered by either a DOE or FERC rulemaking. In deciding which level of government has jurisdiction over reliability matters, it is critical to define what aspect of

reliability is under consideration, for the term “reliability” can include many different dimensions.

NERC focuses on the reliability of the *interconnected bulk power system*, not local distribution system reliability and not reliability of individual generators. Those latter items are left to state and local jurisdiction, or to private contracts. In addition, the interconnected grid spans many states, and what happens in one part of an Interconnection affects the rest of the Interconnection. Moreover, the interconnected grid is an international one. The Western Interconnection includes the Canadian provinces of British Columbia and Alberta, as well as a portion of Baja California Norte in Mexico. The Eastern Interconnection includes not only most of the United States east of the Rocky Mountains, but also Canadian provinces from Saskatchewan through the Maritimes. Whatever authorities are exercised over reliability must take the international character of the grid into account.

NERC also distinguishes between “adequacy” and “security,” when it speaks about reliability matters. By “adequacy,” NERC means the ability of the electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements. NERC periodically reports on the adequacy of the bulk power system: (1) as to the amount of generation capacity installed and projected in relation to load forecasts over time; and (2) as to the amount of installed and projected transmission capacity and anticipated problems in moving generation to load. NERC does not set rules for specific generation or transmission reserve margins. In the past those have been set at the Regional and local level, by Regional Councils or state commissions.

By “security,” NERC means the ability of the electric system to withstand sudden disturbances such as electric short circuits or unanticipated loss of system elements. The grid is generally operated in a “first contingency” mode, that is, so that the grid can withstand the loss of its largest element and remain stable and secure. That means that all the transmission lines are operating within their own thermal limits and their operating security limits (meaning that the failure of a particular line will not cause failure of another line or a system voltage or stability problem). So when a large transformer fails or lightning strikes a power line, as happens as a matter of course, the grid can absorb that loss without causing other elements to fail or the system to become unstable. Operating in this manner preserves the integrity of the grid, but it also places limits on the amount of power that can be moved from one part of the grid to another.

NERC’s rules concern themselves with “security.” They set the standards by which the grid is operated from moment to moment, as well as the standards one must follow in planning and designing an integrated system that is

capable of being operated securely. The NERC standards do not dictate where particular facilities must go, either transmission or generation. The standards do indicate the factors that must be taken into account when planning future additions to the system to assure that it will be capable of secure operation.

States currently exercise jurisdiction over reliability matters for local distribution systems and for retail service. States also exercise jurisdiction over the siting of transmission and generation facilities. In addition, many states have in the past exercised authority over generation adequacy, for example in setting minimum reserve margins. With rare exceptions, states have not exercised any authority over matters pertaining to the reliable operation of the bulk power system. FERC exercises authority over the wholesale sales of electricity in interstate commerce and over the rates, terms, and conditions for transmission service. FERC has not asserted jurisdiction over reliability matters.

It is difficult to see how a FERC rulemaking could shift or revise any of these various jurisdictional allocations.

FERC can, and already has, encouraged the development of regional solutions to some of the problems facing the electric industry. Its Policy Statement on Regional Transmission Groups is one such case. Order 2000 itself has strong encouragement of regional approaches, including an emphasis on state participation in those regional approaches. Another rulemaking that could at most provide further encouragement to regional action, this time on reliability, seems unnecessary.

7. *Recognizing the international nature of the interconnected transmission grid, how could implementation of mandatory reliability standards be coordinated with Canada and Mexico?*

A single, international, independent industry self-regulatory organization is an essential feature of the NERC consensus legislative proposal. Bulk power system operators and users in the United States, Canada, and Mexico would be expected to comply with reliability standards developed by the new organization. Canadian entities now have a strong participation in NERC, and that can be expected to continue in the new electric reliability organization. As the grid in Mexico is strengthened and further interconnected with the U.S., one can expect similar participation from Mexico.

Because the interconnected transmission system operates as a single machine, without regard to the international border, it must operate under a single set of rules. Having an industry self-regulatory organization that is international in character and scope is a way to achieve that necessary common set of rules. Such an organization would need to have the support of regulators in all three

countries. Having a single set of reliability standards that is acceptable to regulators in all three countries accomplishes the necessary coordination. Having each jurisdiction develop its own rules would raise the potential for inconsistent and conflicting rules.

While both formal and informal mechanisms now exist for dealing with issues that need coordination among the countries involved, a more straightforward approach (through a single, independent, international organization) that leads to a single set of acceptable rules seems a much more efficient approach. This is the approach of the NERC consensus legislation.

Conclusion

NERC appreciates the Department's strong interest in acting to protect the reliability of the North American bulk power system, but must recommend against proceeding with a section 403 rulemaking on this matter. As detailed above, FERC currently does not have adequate or clear-cut reliability authority. Therefore, trying to create through rulemaking the mandatory and enforceable reliability rules that all agree are needed would not be effective. Enactment of legislation to authorize creation of an independent, industry self-regulatory organization, with FERC oversight authority in the United States, to promulgate and administer enforceable reliability rules must be the top priority. NERC is already in a transition process that will enable it to serve as this electricity reliability organization. The Department can promote continued reliability of the bulk power system best by working aggressively to get reliability legislation adopted, by supporting NERC's transition, and by providing funding for needed reliability tools and systems.

Respectfully submitted,

NORTH AMERICAN ELECTRIC
RELIABILITY COUNCIL

By:

A handwritten signature in black ink, appearing to read "David N. Cook". The signature is fluid and cursive, with the first name "David" and last name "Cook" being the most prominent parts.

David N. Cook
General Counsel
116-390 Village Boulevard
Princeton, NJ 08540-5731
(609) 452-8060
dcook@nerc.com

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